

ABSTRACT

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A sample aliquot pipette tip (also referred to as a "SAT") includes a pipette tip and a sample aliquot cup. The pipette tip is used for drawing a fluid sample from a source. The pipette tip is formed to be collapsible and may be plastic, for example. The sample aliquot cup is arranged above the pipette tip and is fluidly coupled with the pipette tip. The size of the sample aliquot cup is designed to hold the desired aliquot volume. The SAT is designed to work in concert with tip aliquot support (also referred to as a "TAS"). The TAS may include a channel for accepting a collapsed pipette tip of a SAT, a support for accommodating a sample aliquot cup of a SAT and a constricted passage arranged between the support and the channel. As a SAT is inserted into a TAS, the constricted passage of the TAS collapses the pipette tip of the SAT. The collapsed pipette tip of the SAT is then received by the channel of the TAS. When the SAT is fully inserted into the TAS, the support of the TAS accommodates the sample aliquot cup of the SAT.

An automated aliquot preparation system may use the SAT-TAS combination for pipetting, labeling, and transporting fluid samples. The automated aliquot preparation system may include a conveyor for transporting a liquid sample source, a bar code reader for scanning the bar code of the liquid sample source, a gate for selectively diverting the liquid sample source based on its bar code, a printer for duplicating the bar code onto a sample aliquot cup portion of a SAT, and an automated

pipetting system for positioning the pipette tip of the SAT within the fluid sample source, for drawing a sample from the fluid sample source into the pipette tip of the SAT, and for inserting the SAT into an empty TAS. One or more
5 TASes may be held in a rack.

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